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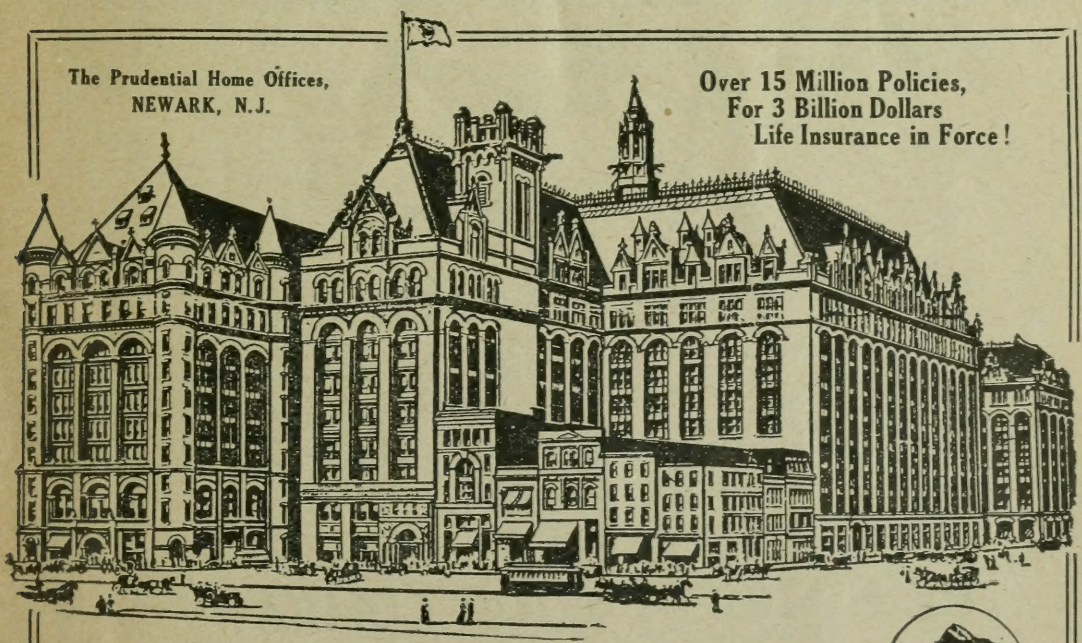

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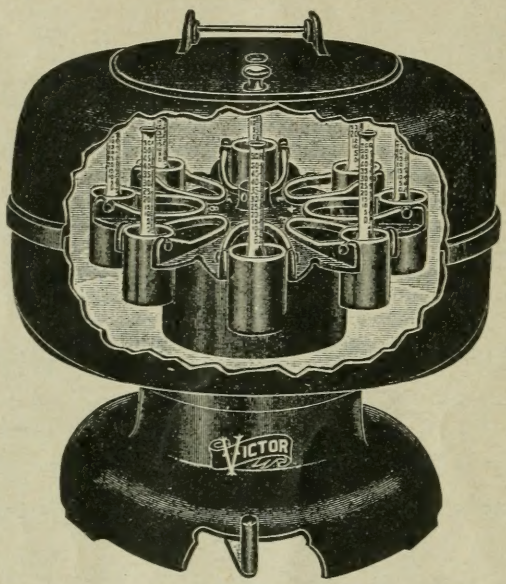

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THE
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Birth Control in its Medical, Social, Economic, and Moral Aspects*

By
S. Adolphus Knopf, M.D.‡

‡Professor of Medicine, Department of Phthisiotherapy, at the New York Post-Graduate Medical School and Hospital; Visiting Physician to the Riverside Hospital-Sanatorium for the Consumptive Poor of the Health Department of the City of New York.

WHEN at this very moment across the sea in Europe the best blood of the nations which were heretofore considered the most enlightened, cultured, and civilized, is daily being shed and hundreds of thousands of young men in the prime of life sacrificed to the Moloch of war, it must seem a hazardous undertaking to talk of birth control, which means artificial birth limitation and by some superficial observers is designated as race suicide. I trust, however, that before I arrive at the end of my paper, I will have convinced you that the object of my appeal is not a plea for reducing the population but for increasing its vigor by reducing the number of the physically, mentally, and morally unfit and adding to the number of physically strong, mentally sound, and higher morally developed men and women.

In accordance with the program outlined, I will deal first with the medical and sanitary aspects of the subject. No one will deny that we occasionally come across a family, well-to-do and intelligent, where the parents by reason of unusual vigor, and particularly by reason of the physical strength of the mother, have been able to rear a large number of children. In some instances all have survived and have grown up to be healthy and vigorous. But these instances are rare and are becoming more and more so every day. On the other hand, large families, that is to say, numerous children as the issue of one couple, among the ignorant, the poor, the underfed and badly housed, the tuberculous, the degenerate, the alcoholic, the vicious, and even the mentally defective, is an everyday spectacle. It is well known to every general practitioner whose field of activity lies among the poor and the above mentioned classes, that the infant mortality among these is very great. The same holds true of the mortality of school children coming from large families among these classes of the population.

Concerning tuberculosis, with which, by reason of many years' experience, I am perhaps more familiar than with other medical and social diseases, let me relate the interesting fact that a carefully taken history of many, many cases has revealed to me that with surprising regularity the tuberculous individual, when he or she comes from a large family, is one of the later born children—the fifth, sixth, seventh, eighth, ninth, etc.

*This address was first delivered at the 44th Annual meeting of the American Public Health Association in Cincinnati, O., October 27, 1916. It was again delivered upon invitation on subsequent dates before the East New York Medical Society, the New York Woman's City Club, and the Social Service League of the Unitarian Church of the Messiah.—Reprinted from the American Journal of Public Health.

The explanation for this phenomenon is obvious. When parents are older, and particularly when the mother is worn out by frequent pregnancies and often weakened because obliged to work in mill, factory, or workshop up to the very day of confinement, the child will come into the world with lessened vitality, its main inheritance being a physiological poverty. This systemic poverty will leave it less resistant, not only to tuberculosis but to all other diseases of infancy and childhood as well.

The morbidity and mortality among these children is greatest when the children are most numerous in one family. Miss Emma Duke, in the third of the Infant Mortality Series, gives the result of a field study in Johnstown, Pa., based on the births of one calendar year (1911). The inspection was made in 1913, of the 1911 babies, so that even the last born baby included had reached its first birthday—or rather has had a chance to reach its first birthday; many of them were dead long before that day. The following is Miss Duke's table showing the infant mortality rate for all children born by married mothers in Johnstown during that year:

Deaths per 1,000 births in—	
Families of 1 and 2 children	108.5
Families of 3 and 4 children	126.0
Families of 5 and 6 children	152.8
Families of 7 and 8 children	176.4
Families of 9 and more children	191.9

Dr. Alice Hamilton of the Memorial Institute for Infectious Diseases, Hull House, Chicago, made a study of 1,600 families in the neighborhood of the settlement. The following is the table of the child mortality rate of the 1,600 families as published by Doctor Hamilton:*

Deaths per 1,000 births in—	
Families of 4 children and less....	118
Families of 6 children	267
Families of 7 children	280
Families of 8 children	291
Families of 9 children and more ..	303

Many families were found of thirteen, fourteen, and even sixteen members. The largest of all was that of an Italian woman who had borne twenty-two and raised two. The small families of every nationality had a lower mortality rate than the large families of the same nationality. The Jewish families of four and less had the astonishingly low mortality rate of 81 per 1,000, while in families of eight and less, the rate rose to 260 per 1,000.

The larger the family, the more congested will be the quarters they live in and the more unsanitary will be the environment. Last, but not least, with the increase of the family there is by no means a corresponding increase of the earning capacity of the father or mother, and as a result malnutrition and insufficient clothing enter as factors to predispose to tuberculosis or cause an already existing latent tuberculosis to become active.

What is the result of this condition in relation to tuberculosis — one single disease? Out of the 200,000 individuals who die annually of tuberculosis in the United States, 50,000 are children. Of the economic loss resulting from these early deaths I will speak later on, but in continuing along the medical and sanitary lines of my subject, I must call your attention to the fact that according to some authors 65 per cent. of women afflicted with tuberculosis, even when afflicted only in the relatively early and curable stages, die as a result of pregnancy which could have been avoided and their lives been saved had they but known the means of prevention.* Some times we succeed in saving such a mother by a timely and careful emptying of the uterus. But an abortion even scientifically carried out and only resorted to with the view of saving the life of the mother, is never desirable, either for the consultant to advise, nor for the gynecologist or obstetrician to perform; and who will dare to say that even under the best conditions this operation is devoid of danger.

What is the explanation and what are the consequences from the point of view of sanitation, of the death of 50,000 tuberculous children? They have mostly become infected from tuberculous parents or tuberculous boarders who had to be taken into the family to help pay the rent.

*Bulletin of the Amer. Acad. of Med., May, 1910, and Miss Mary Alden Hopkins in Harper's Weekly.

*C. A. Credi-Hoerder: "Tuberkulose und Mutterschaft." (J. Kraeger, Berlin, 1915.)

In the crowded homes of the poor there was neither sunlight, air, nor food enough to cure the sufferers and before they died they became disseminators of the disease. Nearly all of the infectious and communicable diseases are more prevalent in the congested, overcrowded homes of the poor, and particularly of those with large families. The propagation of syphilis and gonorrhoea by contact infection, other than sexual, can sometimes be avoided in the homes of the well-to-do, by enlightenment and the conscientiousness of the afflicted. They are almost invariably communicated to the innocent in the homes of the ignorant and poor. Gonorrhoeal infection from parent to child or from one infected member of the family to the other, is responsible more than anything else for the 57,272 blind persons in the United States.*

The great syphilographer Fournier, left us the following irrefutable statistical evidences of the seriousness of syphilitic transmission. As a result of paternal transmission there is a morbidity of 37.0 per cent., and a mortality of 28.0 per cent.; maternal transmission results in 84.0 per cent. morbidity and 60.0 per cent. mortality; and the combined transmissions are no less than 90.0 per cent. of morbidity and 68.5 per cent. mortality.†

I venture to say right here that would or could a syphilitic or gonorrhoeic parent be taught how to prevent conception during the acute and infectious stages of his or her disease, there would certainly be less inherited syphilis, less blindness from gonorrhoeal infection; in other words, less unfortunate children in this world handicapped for life and a burden to the community.

That insanity, idiocy, epilepsy, and alcoholic predisposition are often transmitted from parent to child is now universally admitted, and corroborated by every day experience and by an abundance of statistics. Countless are the millions of dollars expended for the maintenance of these mentally unfit. The State of New York alone spends $2.000.000 annually for the care of its insane. Whether sterilization of these individuals would be the best remedy is a question still open for discussion. The constitutionality of the procedure is doubted by some of our legal authorities. Segregation is resorted to in the meantime with more or less rigor according to the State laws. Every year, however, many of the individuals who had been committed to institutions for the treatment of mental disorders are discharged as cured. They are allowed to procreate their kind. Would it not be an economic saving if at least the individuals whose intelligence has been restored were instructed in the prevention of bringing into the world children who are most likely to be mentally tainted and to become a burden to the community?

The economic loss to our commonwealth from bringing into this world thousands of children mentally and physically crippled for life is beyond calculation. But considering tuberculosis we have been able to calculate at least approximately what it costs. I stated above that 50,000 children die annually from tuberculosis in the United States. Figuring the average length of life of these children to be seven and one-half years and their cost to the community as only $200 per annum, represents a loss of $75.000.000. Such children have died without having been able to give any return to their parents or to the community. Who will dare to calculate in dollars and cents the loss which has accrued to the community because so many mothers died of tuberculosis when an avoidable pregnancy was added to a slight tuberculous ailment in a curable stage? Who will dare to estimate the cost of the loss of an equally large or perhaps larger number of mothers afflicted with serious cardiac or renal diseases, or frail or ill from other causes, whose lives could have been prolonged had an additional pregnancy not aggravated their condition?

Of the many mothers, married and unmarried, who have become chronic invalids and even lost their lives as a result of having resorted to abortive measures in order to rid themselves of an unwelcome child, no statistics are available. If there were, they would be an appalling evidence of the great danger of such criminal procedures and would certainly

*United States Census, 1910.
†Berkowitz: "Late Congenital Syphilis." N. Y. Medical Journal, June 17, 1915.

show the advantage of a more enlightened attitude regarding the means of contraception, at least for the married women who are enfeebled or diseased.

The many diseases I have mentioned whereby children in large families and mothers because of too frequent pregnancies are carried off to an early grave, are not limited to the poor. In regard to economics, the middle class suffers also. Thus, if even a relatively well-to-do family begins to increase out of all proportion to the earnings of the father, the family will soon be in want and approaching poverty. Less and less good food, less sanitary housing, less care of the children, and more sickness will almost inevitably result. Every sickness or death of child or adult has increased the expenses of the family. There is the doctor's bill, the druggist's bill, and last but not least, that of the undertaker. A grave had to be purchased. If there have been savings, they are gradually swallowed up and debts are often contracted for the sake of a decent funeral.

Next to the medical and sanitary comes the physiological aspect of birth control, which can be summarized in a very few sentences. The average mother with two, three, or four children, not having arrived in too rapid succession, say with two or three years intervening, is physiologically, that is to say, physically and mentally, stronger and better equipped to cope with life's problems than the worn out and weakened mother whose life is shortened by frequent and numerous pregnancies.

What is the physiological effect of voluntary artificial restriction of the birth-rate? In Holland, where the medical and legal professions have openly approved and helped to extend artificial restriction of the birth-rate, the health of the people at large, as shown by its general death-rate, has improved faster than in any other country in the world. At the recent Eugenics Congress it was stated that the stature of the Dutch people was increasing more rapidly than that of any other country—the increase being no less than four inches within the last fifty years. According to the Official Statistical Year Book of the Netherlands, the proportion of young men drawn for the army over 5 ft. 7 in. in height has increased from 24½ to 47½ per cent. since 1865, while the proportion below 5 ft. 2½ in. in height has fallen from 25 per cent. to under 8 per cent.*

In that enlightened country, the teaching by the medical profession of the most hygienic methods of birth limitation has enabled the poor to have small families which they could raise to be physically and morally better equipped than formerly. What is most interesting to observe, however, is that, whether as a result of this or for some other reason, the families among the well-to-do are not nearly as small as in other countries.

In Australia and New Zealand, the means of artificial restriction are in free circulation and the restriction of families is almost universal. Yet these two English colonies have furnished to their mother country in these hours of struggle the most efficient, and physically and mentally best equipped regiments. The soldiers of Australia and New Zealand have shown themselves brave and fearless fighters and certainly equal, if not superior, as far as physical endurance is concerned, to their English brethren. In the latter country, it is well known birth control is frowned upon by the legal and nearly all the ecclesiastical authorities.

And what of France? Before the present war Drysdale, in his "Small Family System," very aptly says: "It has become the fashion to speak of the depravity of France, of her alcoholism, of her disregard for law and order, and of her terrible 'crimes passionels,' and to ascribe to them the falling birth rate. If this were the case it is obvious that these evils would be most intense where the process had gone furthest, i. e., in the cantons of the lowest birth rate (The French islands of Re and Oleron)." The passions of the inhabitants of these islands are very innocent. "They are reading and dancing. The dancing, always decent, is the preparation for marriage; illegitimate births are very rare. One could not imagine manners more pleasant or more honorable. Nevertheless the birth rate in these islands is among

*"The Small Family System; Is It Injurious or Immoral?" By Dr. C. V. Drysdale; Publ. by B. W. Huebsch, New York.

the lowest. It is because everyone there is more or less of a proprietor. Each person has some property to protect; each is ambitious for his children." But we have the authority of Doctor Bertillon, the great French statistician, that it is just in the cantons of these islands in which the greatest moral improvement has taken place, and that where the French have obeyed the command to increase and multiply, there alcoholism and crime abound.

Let me quote briefly from an editorial on contraception which appeared in the Medical Times of April, 1916: "France today is presenting her splendid spectacle of utter efficiency to the world because only the fittest of her people have survived, and the chief factor there has admittedly been contraception. Surely we have heard the last of the croakers about decadent France. Holland would give an equally good account of herself if the need should arise and for the same reason."

We have already touched in part on the economic cost growing into the millions which accrues annually to the nation because of a high birth-rate concomitant with a high infant and child mortality rate. Well may we ask the question whether disease and the deaths of thousands of women and children can not be prevented by an enlightened attitude toward the question of birth control. Why is it not done? If the millions of dollars expended uselessly reverted to the nation's wealth, would they not add immeasurably to the health and economic happiness of the nation at large?

And now we come to the social or sociological aspect of our topic, so closely interwoven with economics. That the social and moral life of a smaller family, where the father earns enough to support wife and children and where the mother can devote her time to the care of them, and where neither she nor the children must go out and help in the support of the family, is superior to that of a family with a large number of children where the mother and often the older children must slave, does not permit discussion. The larger the family of the poor the more child labor, the more there is disruption and irregularity, and the more frequently one finds a lower standard of life and morals in general.

The records of our charities and benevolent societies amply prove that as a rule the larger the families are that apply for relief the greater is their distress.

In answer to a leter from Doctor Foote, containing suggestions on this topic, the president of the New York Association for Improving the Condition of the Poor very pertinently said:

"The race suicide theory which has been so much exploited of late, is an immense encouragement to the large family idea and the illiterate are hardly to be blamed if they are misled upon this question. The subject that you discuss is one that is worthy of serious consideration and that has in the past been treated with an excess of sentiment."

That judicious birth control does not mean race suicide, but on the contrary race preservation, may be shown from the reports from Holland. The average birth-rate in the three principal cities of Holland was 37.7 per 1,000 in 1881, when birth control clinics were started. In 1912 it had fallen to 25.3 per 1,000. The general death-rate, however, had dropped in the same period from 24.2 to 11.1 per 1,000, or to less than half, while the two-thirds reduction in the mortality of children under one year of age—from 209 to 70 per 1,000 living births—is even more significant. (Birth Control News, published by Birth Control League of Ohio, Cleveland, Vol. I, No. 1.)

As a final evidence of the social and economic value of imparting information concerning family limitation, permit me to quote from a personal letter to me from the great pioneer of this humanitarian movement, Dr. J. Rutgers, the Honorable Secretary of the Neo-Malthusian League of The Hague. The league has been in existence since 1888 and received its legal sanction by a royal decree January 30, 1895. It has 6,000 contributing members; all information is given gratuitously. As a result of this league in Holland one does not see any more children dressed in rags as in former years prior to the starting of this move-

ment. To use the venerable secretary's own words: "All children you now see are suitably dressed, they look now as neat as formerly only the children of the village clergyman did. In the families of the laborers there is now a better personal and general hygiene, a finer moral and intellectual development. All this has become possible by limitation in the number of children in these families. It may be that now and then this preventive teaching has caused illicit intercourse, but on the whole morality is now on a much higher level and mercenary prostitution with its demoralizing consequences and propagation of contagious diseases is on the decline. The best test (the only possible mathematical test) of our moral, physiological, and financial progress, is the constant increase in longevity of our population. In 1890 to 1899 it was 46.20; in 1900 to 1909 it was 51 years. Such rise cannot be equalled in any other country except in Scandinavia where birth limitation was preached long before it was in Holland. None of the dreadful consequences anticipated by the advocates of clericalism, militarism, and conservatism have occurred. In spite of our low birth-rate the population in our country is rising faster than ever before, simply because it is concomitant with a greater economic improvement and better child hygiene."

To verify these figures statistically, Doctor Rutgers refers to Drysdale's diagrams.* The good doctor closes his splendid letter by saying: "One must have been a family physician for twenty-five years like myself in a large city (Rotterdam) to appreciate the blessings of conscious motherhood resulting in the better care of children, the higher moral standard. And all these blessings are taken away from you by your government's peculiar laws, made to please the Puritans."

To these latter well-meaning people and those similarly minded who fear race suicide, particularly a decline of the American stock, I strongly recommend the reading of that splendid address by Professor Charles A. S. Reed, A.M., M.D., former president of the American Medical Association, entitled "The American Family." In the chapter on "The Outlook of the American Family," he very pertinently says: "We see in a declining birth-rate only a natural and evolutional adjustment of race to environment—an adjustment that insures rather than menaces the perpetuation of our kind under favoring conditions." And concerning under-population in general, this distinguished writer says in the same address: "It seems, indeed, to the careful student that the danger to the American family to-day and still more in the future lies in the direction of overpopulation rather than underpopulation."

According to Mulhall and Reed, the increase in the density of population from 1820 to 1890 was 650 per cent. in the United States (only 25 per cent. in the United Kingdom and less than 100 per cent. in France and Belgium). The rate of increase in this country has been vastly accelerated in the twenty-five years that have since elapsed. Our population to-day of over 100,000,000 has been doubling itself on an average of once in less than twenty-five years since 1790, and it will probably continue to do so in the future. May I say in passing, that in the State of New York we have observed the alarming phenomenon that the proportional increase among the insane is double that among the sane population?

And now I approach the last and most important phase of my subject, namely the moral, which to me means no less than the religious phase of this great problem. Let me say to you, my colleagues, that I approach it with awe and reverence, for I believe I fully understand the import of it.

A quarter of a century of practice among the tuberculous, the rich and the poor, in palatial homes, humble cottages, dark and dreary tenements, and in overcrowded hospitals, has shown me enough to bring to my mind the utter immorality of thoughtless procreation, and my experience has been limited to this one disease of the masses. The tears and sufferings I have witnessed when I have had

*"Diagrams of International Vital Statistics With Description in English and Esperanto, together with a Table of Correlation Coefficients Between Birth and Death-rates, etc." By C. V. Drysdale, D. Sc.: London: Wm. Bell, 162 Drury Lane, W.C., 1912.

to decline help because it was too late to prevent the despair of the poor, frail mother at the prospect of another inevitable confinement, and later the sight of a puny babe destined to disease, poverty, and misery, has made me take the stand I am taking to-day. I am doing it after profound reflection, and I am fully aware of the opposition I am bound to meet. But in my early career as an antituberculosis crusader, I became accustomed to the fate of those who venture on new and heretofore untrodden paths of progress.

What would the moral outcome of birth control, or let us rather say, rational family limitation be, if taught judiciously to those seeking and needing the advice? Millions of unborn children would be saved by contraception from the curse of handicapped existence as members of a family struggling with poverty or disease.

There are hundreds of young men and women, physically and morally strong, who gladly would enter wedlock if they knew that they could restrict their family to such an extent as to raise few children well. But their fear of a large family retards, if it does not prevent, their happiness, and ipso facto the procreation of a better and stronger manhood and womanhood. The woman withers away in sorrowful maidenhood and the man whose sexual instincts are often so strong that he cannot refrain, seeks relief in association with the unfortunate and often diseased sisters, called prostitutes. The result is a propagation of veneral diseases with all its dire consequences. To an audience composed of physicians and sanitarians I need not say what these consequences are. They involve sterility, physical and mental suffering in the man, or sterility in both man and woman; and according to the severity of the infection, abortion, premature labor, a dead child, or one lastingly tainted with disease.

At times disease does not enter as a factor in the tragedy, but the result is a girl mother, a blasted life, for our double standard of morality recognizes only the "sin" in our sisters, not in ourselves. Of her, compassionate tongues only say she loved not wisely but too well; of him, nothing is said at all. He is spotless and virtuous in the eyes of the world and can go through life as if he had never sinned and been responsible for a blasted life or two.

Even our moralists must acknowledge that by an early marriage with a man of her choice, enabled by understanding to limit the number of children, many a girl would be saved from so called dishonor and in many instances from prostitution. One of the strongest arguments of our moralists and purists is that the knowledge of contraception would lead the young to enter forbidden sexual relations and degrade them morally. Granted that this may happen in a number of instances, the benefit derived from a diminution of veneral diseases, from a greater number of happy and successful marriages among the younger people, fewer but better and healthier offspring instead of an unrestricted procreation of the underfed, the tuberculous, the alcoholics, the degenerate, the feeble-minded and insane, would more than outweigh the isolated instances of sexual intercourse prior to marriage.

I absolutely agree with our moral teachers when they say that self-control is possible, but while it may be easy for many it is not easy for all. Sociologically speaking, it is even more difficult when you deal with a married couple belonging to the poorer classes who cannot have separate bedrooms. Self-control can be more easily exercised prior to marriage than afterwards.

The critics of birth control maintain that with the knowledge of birth limitation many women, whether poor or rich, who should and can bear children will shirk the duties of motherhood. This I do not believe to be true. You can no more prevent the desire for motherhood in the normal, healthy woman than you can stem the tide of the ocean. It is inherent in every woman's heart. With more marriages of young people and a rational birth control, I do believe there will not be fewer children but the same number of better ones. There will be, of course, instances—and there are too many in certain classes of society now—where for purely selfish reasons the marriage remains barren, but it is a question in my mind whether it would be really desirable

for society to have such women be mothers.

It has been asserted by the same critics that the enfeebled, diseased, ignorant, and poverty stricken woman in whose case birth control might be justified, will never know about the existence of birth control clinics. In Holland, however, there must have been some such ignorant women, yet they seem to have learned to avail themselves of the service of such clinics. Besides, these classes will sooner or later come under the observation of some physician, either privately or in a hospital. Some opponents to the birth control propaganda say that the measure advocated would not reach the feeble-minded, the idiotic, half insane, chronic alcoholics, and chronic criminals. This I will grant, and sterilization of those totally unfit for parenthood will some day have to become a state measure, unless segregation is resorted to more universally and more rigorously. Birth control is only one measure toward a saner and happier manhood, womanhood, and childhood.

Finally, I must mention the almost pathetic criticisms of some of my colleagues who wrote me, in answer to my request for an expression of opinion, that the matter of birth control was a question not for the medical profession, but for the laity. To such I can only express my regret at their attitude. The physician of the twentieth century who deals only with the purely medical and curative part of his profession, who is indifferent to measures to prevent disease, and cannot feel with the social sufferings of the masses, is lacking in the highest ideals of his calling and misses the greatest opportunity of benefiting suffering mankind.

After all is said, I feel impelled to plead with great earnestness for the abolishment of the state and federal laws which make the imparting of knowledge for contraception a criminal offense. I plead for the establishment of gratuitous clinics, directed by regular physicians of high repute, remunerated by city or state, who are competent to give information as to birth limitation in cases where they deem the giving of such instructions advisable.

Concerning the urgency and the wisdom of efforts to change these laws I am sure that you will be willing to listen to the words of two of our greatest American physicians; first, to those of our venerable nestor of the medical profession, Professor A. Jacobi of New York, the ex-president of the American Medical Association; secondly to Prefessor Hermann M. Biggs of New York, my beloved teacher, the distinguished sanitarian and pioneer in the modern warfare against tuberculosis. In his preface to Dr. William J. Robinson's book, "The Limitation of Offspring," Dr. Jacobi says: "Our federal and state laws on the subject of prevention of conception are grievously wrong and unjust. It is important that these laws be repealed at the earliest possible moment; it is important that useful teaching be not crippled, that personal freedom be not interfered with, that the independence of married couples be protected, that families be safe-guarded in regard to health and comfort, and that the future children of the nation be prepared for competent and comfortable citizenship."

Dr. Hermann M. Biggs, prior to the recent dismissal of the case by Judge Dayton of the Federal Court, against Mrs. Sanger for sending information about birth control through the mails, gave to the press the following statement: "I am strongly of the opinion that the present laws in regard to the giving out of information in relation to the governing of infant control are unwise and should be revised. There can be no question in the mind of any one familiar with the facts that the unrestricted propagation of the mentally and physically unfit as legally encouraged at the present time is coming to be a serious menace to civilization and constitutes a great drain on your economic resources. This is my personal view."

To the foregoing expressions of opinions let me add what one of our most distinguished jurists, the Hon. Judge William H. Wadhams, of the Court of General Sessions, wrote me concerning these laws: "In order to save the state from the burden of large families, where there is no possibility of their being supported and where the neglect which follows often results in their becoming State charges

not only because they are mentally, but often physically unfit to bear the burden of life, I am of the opinion that there should be some proper birth regulation after a certain number of children have been born, and that therefore, there should also be some modification of the laws with respect to the giving of information upon this subject. I think the sanitary, medical, social, economic, and moral status of the population would be improved by proper and more general information upon this subject."

Besides the letter from this eminent judicial authority and the strong expressions of opinion of A. Jacobi, M. D., and Hermann M. Biggs, M. D., I have been the recipient of communications from many leading physicians, divines, political economists, and sociologists, all agreeing with me that judicious birth control, under the highest ethical and medical guidance, is a national necessity and that our present laws on the subject need urgent revision. For want of space I will mention only the following: Dr. John N. Hurty, secretary, Indiana State Board of Health; Dr. Godfrey R. Pisek, professor of diseases of children, New York Post-Graduate Medical School and Hospital; Dr. J. W. Trask, of Washington, D. C.; Dr. Lydia Allen de Vilbiss, formerly of the New York State Department of Health, now in charge of the division of Child Hygiene of the State Board of Kansas; Dr. Ira S. Wile, editor of American Medicine, New York; Dr. John A. Wyeth, professor of surgery and president of the New York Polyclinic Medical School and Hospital, ex-president of the American Medical Association and New York Academy of Medicine: Frank Crane, D. D., formerly pastor of the Union Congregational Church of Worcester, Mass., now well known writer of leading editorial articles; Percy S. Grant, D. D., rector, Protestant Episcopal Church of the Ascension of New York City; Frank Oliver Hall, D. D., minister of the Church of the Divine Paternity, New York City; John Haynes Holmes, M. A., Minister, Unitarian Church of the Messiah, New York City; Stephen S. Wise, D. D., Rabbi of the Free Synagogue, New York City; James A. Field, Ph. D., Professor of economics, University of Chicago; Irving Fisher, Ph. D., professor of political economy of Yale University and chairman of the Hygiene Reference Board of the Life Extension Institute; Franklin H. Giddings, Ph. D., professor of political science, Columbia University; William H. Allen, Ph. D., director of the Institute for Public Service of New York City; Hon. Homer Folks, former commissioner of charities of New York, now secretary of the State Charities Aid Association of New York; Lillian D. Wald, founder of the Henry Street Settlement and originator of the work of the School Nurse in New York; Prof., Melvil Dewey, LL.D., educator and president of the National Society for Efficiency.

I leave it to this distinguished body of physicians and sanitarians either to send a memorandum to the federal and all state governments setting forth the reason for a change of these laws, or if it is thought wiser, to form a committee to study the best and most practical suggestions for federal or state legislatures to act upon.

Dr. William L. Holt, writing on birth control as a social necessity and duty, says: "Conscious and limited procreation is dictated by love and intelligance; it improves the race. Unconscious, irresponsible procreation produces domestic misery, and half-starved children. Conscious procreation of human lives elevates man to the gods. Unconscious procreation degrades man to the level of brutes."

May I be permitted to close with what I am free to confess is my innermost conviction? I believe in birth control, that is to say, birth limitation, based on medical, sanitary, ethical, moral, and economic reasons. I believe in it because with the aid of it man and woman can decide when to have a child, work and prepare for its arrival, welcome it as the fulfilment of their heart's desire, watch over it, tenderly care for and educate it, and raise it to be what every child should be destined to be—a being happy, healthy, strong in mind, body, and soul. If we but use our God-given sense to regulate the affairs of government and family wisely and economically, this great world of ours will be one of plenty and beauty, where the good will predominate over the evil and

the children born in it will become men and women only a little lower than the angels—images of their Creator.

Discussion

Dr. Ira S. Wile, New York City: In reading the thoughtful paper of Doctor Knopf, a number of thoughts suggested themselves. Birth control is recognized to-day as a factor in eugenic control. Some states take cognizance of the advantages of limiting the number of offspring in so far as defectives and criminals are concerned. The laws of numerous states permitting sterilization or asexualization place the seal of governmental approval upon the prevention of procreation in the interests of the public weal. Numerous regulations providing for the segregation of defectives represent crystallizations into law of the principle that the state has a vital interest in controlling the birth of certain types of citizens. States requiring a certificate of health previous to marriage point out a deep interest in the character of health of those who are to become parents. The underlying principle is the protection of the state from the development of undesirable children.

The law recognizes the interruption of pregnancy as legal and justifiable in order to save the lives of women suffering from tuberculosis, nephritis, cardiac diseases, or from conditions, whose fatal progress would be hastened through continued pregnancy, but the law holds it to be illegal to teach these same women how to avoid conception. It is manifestly contrary to every principle of modern preventive medicine that there should be such interference with the judgment and action of physicians where it seems most rational and medically sound to give advice as to the methods of preventing a condition containing a hazard to life.

Despite the existing laws, contraception is practiced and undoubtedly taught by members of the medical and nursing profession, as well as by midwives. What is equally important is the fact that contraceptives are sold in drug stores throughout the country without any interference, providing conscience is stretched and the instrumentalities are dispensed on the plea that they are agents for the prevention of disease.

It is known that in 1900 there were only three-quarters as many living children to each 1,000 potential mothers in the United States as in 1860. The reason for this decreased birth-rate is undoubtedly in a large part due to "the deliberate and voluntary avoidance or prevention of child bearing on the part of a steadily increasing number of married people, who not only prefer to have but few children, but who know how to obtain their wish" to quote the words of Dr. John Shaw Billings. At the present time, the practice of birth control is more or less limited to the more intelligent part of the population and indeed to those whose means would most warrant the development of large families.

Public health sees in poverty its great enemy and realizes that education is its most capable ally. The education of potential parents as to the methods of preventing conception may be regarded distinctly as a public health measure. From the standpoint of the welfare of the race, those interested in public health measures are more vitally interested in the rigor and quality of children born than in their absolute numbers. The birth of the most vigorous children, those least susceptible to disease, and possessing the greatest chance of living are the particular types of infancy in which health officers should be interested. The reduction of dysgenic types of offispring and the decrease of infants variously handicapped, whose care-needing existence lessens family vitality represent a considerable part of the public health problem.

The tremendous wastage of human life resulting from stillbirths, congenital diseases, malformations, puerperal injuries and infections, and economic pressures may be partially offset by a properly controlled system of dissemination of information concerning the limitation of offspring. The old doctrine of the survival of the fittest has been superseded by our artificial and humanitariam program which permits the survival of even many of the weakest of the infantile population.

It is well known that the rate of infant

mortality, as pointed out in the paper of Doctor Knopf, increases with the size of the family. To quote from Doctor Hibbs in his discussion of Infant Mortality: Its Relations to Social and Industrial Conditions. "However dangerous, 'race suicide' and the declining birth-rate may be there can be little doubt that excessively large families is no remedy and however desirable a high rate of births may be, it is mere waste to bring children into the world faster than nature decrees to be desirable." Race suicide is not due to limiting the number of births, but is determined by the ratio between births and deaths. From the standpoint of public health, it is a greater degree of race suicide to bring six children into the world and lose two or three of them than to have two born and reared. The social consequences of large families with the accompanying loss in lives and vitality have been sufficiently described, so that further comment is unnecessary.

From the standpoint of public health, it is important that a very sharp line of demarcation should be established between abortions and the prevention of conception. The interruption of pregnancy to destroy a developing ovum entails physical hazards to the woman which often adds to the mortality rate. At the same time this is equally the destruction of life as foeticide, and, literally speaking, infanticide. According to DeLee, while abortion occurs oftener among the lower classes, criminal abortion is more frequent among the more educated classes.

Howard Kelly (Medical Gynecology, page 449) comments "to what extent the medical profession is responsible for the murder of the unborn" is shown by the methods that women employ to induce abortions upon themselves, making use of antiseptic technic in which they obviously had been instructed.

The Report of the Special Committee on Criminal Abortions quoted in Textbook of Legal Medicine and Toxicology (Peterson and Haines, Volume II, page 92) "estimated that one-third of all pregnancies throughout the country end in abortions. This is estimated at not less than 100,000 yearly. A large number of these are criminal abortions from which the committee estimated that 6,000 women die yearly." A fact of this character merits careful consideration by a public health association with a view to pointing out to the intelligent laity and legislators the importance of differentiating between the prevention of conception, which carries practically no morbidity and certainly no mortality, and abortion, which may cause destruction of two lives.

Howard Kelly in discussing syphilis (Medical Gynecology, page 423) states "It is the recognized duty of all physicians in the presence of any contagious disease to protect others from the risks of infection. In the case of syphilis, where there is a question of its introduction into marriage, the physician's protective duty embraces not only the prospective wife, but the children she may bring into the world and through them the interests of society." (Page 424.) After marriage has occurred "when a married man has syphilis the first indication is to prevent the contamination of his wife, the second is to guard against pregnancy." The interpretation of the term "guarding against pregnancy" opens up the question as to how this is to be accomplished without violating existing laws.

It is urged that the frank discussion of methods of contraception by physicians will lead to an increase of clandestine relaions among unmarried girls by virtue of the new knowledge. Clandestine prostitution exists to-day and fear of pregnancy is not an impassible barrier. The development of a conscious morality, which is the greatest protective force, should not be based upon fear. Admitting for the sake of argument that the same degree of immorality might exist, there would be at least a decreased destruction of life for the women now illegitimately pregnant and the fetus to be destroyed. Fewer homes would suffer disgrace, foundlings would decrease in number, while an accursed bastardy would be greatly diminished.

I do not advocate, however, that knowledge concerning the prevention of conception should be given to the young, but merely to adults and only to those who are wedded. It cannot be denied that a law of this character would undoubtedly be

broken just as is the present law to-day. The transmission of some facts with reference to contraception is constantly going on, but they emanate from polluted sources and reflect folk lore rather than intelligent medical opinion.

I do not favor the abolition of federal or state laws which deal with abortions, though owing to the weight of public opinion convictions for violations of these laws are remarkably limited in view of the large number of violations occurring annually. I believe and would urge that the federal and state laws be amended so that in effect the procuring of an abortion and the preventing of conception will be dissociated as acts not synonymous in character and meriting entirely different treatment. The procuring of an abortion should still be penalized. The prevention of conception should be permitted. The New York State law links prevention of conception and unlawful abortion, thus indicating the legality of certain types of abortion.

Because the state already recognizes its right to limit procreation among certain groups of the population, because the decrease in the birth-rate will result in improved public health and the social economic improvement of the masses of this country, because prevention of conception would add to the health and racial betterment of the nation, I believe that the American Public Health Association should take a stand upon the subject of limitation of offspring. To this end, I urge that resolutions be passed favoring the amendment of federal and state laws, so that the words preventing or prevention of conception be eliminated therefrom.

Dr. J. H. Landis, Health Officer, Cincinnati, Ohio: It goes without saying that we are all in favor of reducing the number of those who are physically, mentally and morally unfit and adding to the number of those who are physically fit, mentally sound and more highly developed morally.

The paper brings to our attention a number of facts that have long been recognized as true. No one will deny that the offspring of a tuberculous mother has a poorer chance of living than one from a mother without a wasting disease or that the healthy mother has a better chance of surviving pregnancy than has her diseased sister.

No one doubts that infant mortality is greatest among the offsprings of the ignorant, the poor, the underfed and badly housed, the tuberculous, the degenerate the alcoholic, the vicious and the mentally defective.

Congestion and lack of air and sunshine have long been recognized as powerful predisposing factors in the dissemination of disease and death among those exposed.

The remedy suggested for all of these conditions is birth control. The remedy is directed towards the effects produced instead of being directed at the causes producing them.

I am unable to see how birth control is to solve the problems created by vice, poverty, ignorance and alcoholism while these conditions go on unchecked, and am unwilling to believe that the size of the family has anything to do with any of them with the possible exception of poverty.

The pride and glory of the medical profession is bound up in the word "prevention." Humanity owes us a far greater debt for sickness prevented than for sickness cured.

A multitude of causes are responsible for the high tuberculosis rates that prevail. The disease is one of the most contagious with which we have to deal. Nature's favorite method of removing the unfit, from any cause, is by the tuberculosis route.

The control of tuberculosis involves all of the factors active in producing individuals who are rendered susceptible by these factors, the quarantining of those who are spreading the disease and the care of those other members of the family rendered dependent. Birth control can play only a minor role in the control of this disease.

Birth control will not enlighten the ignorant, render the poverty-stricken affluent, transform the alcoholic into a total abstainer, make the vicious virtuous, or remove the cloud from the brain of the mentally defective.

Definite causes are combining to pro-

duce these results and the logical point of attack is the combination of causes.

The ignorant can be educated: the poor made more thrifty; the vicious forcibly restrained; and the mentally defective rendered incapable of reproducing their kind.

The prevalence of typhoid fever is an index to the purity of a community's water and milk supply. Filtration of water and pasteurization of milk have solved the typhoid fever problem in those communities in which they have been efficiently carried on.

Vice, crime, tuberculosis, poverty, degeneracy, alcoholism, ignorance and feeble-mindedness are as distinctly due to particular preventive causes as typhoid fever is to impure water and milk, and it appears to me that birth control would be as impotent to control the first set of conditions as it would be to control typhoid fever.

Dissemination of the knowledge of birth control would, in my humble judgment, decrease the number of fit and increase the number of unfit for the reason that the knowledge would be applied by those capable of producing normal children and ignored by those unfit individuals who are under the guidance and control of the most powerful primal instinct.

Dr. J. N. Hurty, Indianapolis, Ind.: We, the people are suffering from many delusions. Nearly everyone entertains the delusion, that they can violate the laws of nature, abuse their bodies, bring on disease and degeneracy, and then find repair in a medicine. It is a fool idea, yet it is very general. There are other delusions. There is only one way to improve the human race, and that is the natural way. The first high point of interest in the paper is when Doctor Knopf says—"My appeal is not a plea for reducing the population but for increasing its vigor by reducing the number of the physically, mentally and morally unfit and adding to the number of the physically strong, mentally sound and higher morally developed men and women." Certainly no one on any score can object to this. The idea is practical, pure and lofty. If general birth control will help it onward, even a little bit, then I am for general birth control. I suppose no one would advocate the raising of idiots or physically deformed people, yet when it is proposed not to raise them, through the practical application of sterilization or segregation, up goes a howl from the prudes which is of a character likely to provoke emesis. It is important and interesting to learn that when tuberculosis appears in a large family, it is generally numbers 5, 6, 7, 8 or 9 of the children that are stricken. This is indeed significant, and I believe it to be true. When I read this in Doctor Knopf's paper I made some inquiries of two men who have done a great deal of tuberculosis work, and they confirmed it and said they believed it was true. Again, Miss Duke's Johnstown figures speak loudly against families of above four children. For a pair to have more is generally to invite sickness, invalidism and death, and if we will stop to think and look around among the prosperous, great and strong people as a rule (of course there are exceptions) they do not have families of more than four and generally about two. I do not believe that this condition has been brought about by continence. Surely pregnancy is contraindicated in a tuberculosis woman unless it is desirable to kill her and add to the number of pitiful motherless babies. A husband who cannot be continent with a tuberculosis wife is a sorry specimen of manhood and truly such specimens are many. And here I think it proper to say that birth control will not likely ever be a resultant of voluntary continence. Like education and monogamy, it must be forced upon most of the animals we call men. An important point made by Doctor Knopf is, "would or could a syphilitic or gonorrhoeic parent know how to prevent conception during the acute and infectious stages of his or her disease, there would certainly be less of congenital syphilis, less blindness from gonorrhoeal infection." If these ends can be gained, even in slight degree, by birth control, I'm for it strong. I remember the doctor in "Damaged Goods" says—'It is better to have fifty sound and whole men than to have a hundred, sixty or seventy of whom are more or less rotten."

That is an important interrogatory in

the paper which reads—"What is the physiological effect of voluntary artificial restriction of the birth-rate of the offspring?" The answer is satisfactory, for the reports from Holland, where the medical profession have openly approved and helped to extend artificial restriction, are to the effect that the morbidity and mortality rates have improved more rapidly than in other countries. Holland also supplies data to prove that rational birth control does not mean race suicide, but on the contrary, race preservation and strengthening. Doctor Holt, as quoted by Doctor Knopf, talks wisely when he says—"Conscious and limited procreation is dictated by love and intelligence; it improves the race. Unconscious, irresponsible procreation produces domestic misery and half-starved children. Conscious procreation of human lives elevates man to the gods; unconscious procreation degrades man to the level of brutes." It is plain that Doctor Knopf has contended and written well. Conscientiousness in his contention is apparent. I am sure good will follow his effort.

Dr. W. L. Holt: "I should like to call your attention to the fact that we as a nation, like all the civilized nations, are already practicing birth control; but in a very stupid and mistaken way. Namely just that part of the population which is called "the upper class," which is undoubtedly superior physically and mentally as well as financially and accordingly produces the most desirable children and ought to produce at least its share of the future generation, is practicing birth control to such an extent that the old families are dying out; whereas the inferior part of our population, which is also financially least able to raise four children, is raising four and more. What could be more stupid?

Dr. Louis I. Dublin, New York City: The other day I contributed a paper in another section on the commoner errors in statistical work. I wish I had had Doctor Knopf's paper at my disposal for I could have used it very profitably for my text. I do not recall any paper that I have read for some time that is more subject to criticism on the score of method than the paper we have just heard. I believe it is fundamentally erroneous because of the emotional attitude of the writer which has caused him to draw general conclusions from an examination of only a very limited part of his subject. His emphasis is entirely in the wrong place. There is altogether too much birth control now and what the community needs is emphasis on birth release by the healthy, capable and self-respecting elements of the community.

There is time only for one word and I want to limit that to the story of France. In France, we have to-day a sorry spectacle of the results of birth control. The lesson is obvious. France is to-day crying for men; for men who were either not born or died at an alarming rate in infancy or later tuberculosis. The attitude of mind whcih is engendered by a nation-wide policy of birth control ultimately brings about more infant mortality and more tuberculosis because of the general weakening of the stock which directly results therefrom.

A Member: It strikes me that the whole question resolves itself into who should marry and who should not marry. Unless we have some laws regulating marriage, to teach young men and young women the nature of the social diseases and the conditions necessary for a good physical body, why, we will have tuberculosis, we will have degenerates, we will have idiots and imbeciles, and our penitentiaries and almshouses and every other penal institution will be filled. The whole question is prevention; I believe strictly in the doctrine of heredity. Heredity, environment and education is the triangle that leads to greatness. If we do not hover around those three points, we will never succeed. We know that if two degenerates marry, they beget degenerate children, beget imbeciles. If an imbecile marries a normal person, half of the children will be imbeciles or degenerates, and we have the records of criminality and all those deficiencies and the penalty is the result of improper marriage. Teach the laws of nature and our mothers will demand that their daughters don't marry a man who has in his veins the virus of a veneral disease circulating through his body.

Dr. John W. Trask, United States Public Health Service, Washington, D.C.: The subject may be approached from a number of different angles. During the discussion a thought has occurred to me which may be worth presenting. What is the common reason for wanting the population to grow? What is at the bottom of the more or less prevalent idea that it is meritorious to be the parent of many children? It has occurred to me while sitting here that chambers of commerce and boards of trade want the populations of their respective cities to increase—the faster, the better—because it is to their interest to have more individuals to sell things to, more individuals to whom they can sell dry goods, clothing and groceries, more individuals to whom to sell houses and land. The greater the population the more business will be done and the greater the increase in the value of real estate. On the other hand, those interested in affairs of state may want the population of their country to grow that there may be a larger group from which to draw an army for purposes of defence or perhaps offence. Birth control is opposed in a way to the interests of business and of the holders of real estate. Nor will it be the best national policy where a growing population and large armies are necessary as a protection against invasion or oppression by lawless peoples. However, it would seem at least worthy of consideration whether the best conditions would not be attained by families commensurate in size with the household incomes and by nations commensurate in population with their areas, economic conditions and natural resources. Better people, living cleaner, healthier and more rational lives, and not more people, would seem to be the logical objective.

Dr. Knopf:* My first duty is of course to thank you all for the very kind attention you have given to my paper on a rather unusual and, in some circles, rather unpopular subject. It shows that you have come here determined to listen and then to judge—to accept my ideas, to reject them, or to suspend judgment.

Dr. Ira S. Wile agrees with me so thoroughly that I see very little reason to take up time in referring to his paper, except to thank him for his co-operation and particularly for the strong opinion he has expressed concerning the urgent need of recommending an amendment of the federal and state laws to the effect that the procuring of an abortion and the prevention of conception will be disassociated, and considered as acts meriting entirely different treatment. We all agree that producing an abortion for no other reason than to rid a healthy mother of an unwelcome child is a crime and should continue to be considered as such.

Doctor Landis' paper is a little surprising to me. When the doctor says in today's discussion that birth control will not do away with our social evils, will not render the poverty stricken affluent, not transfer the alcoholic into a total abstainer, nor remove the cloud from a mentally defective, he is but partially right. Birth control has enlightened the ignorant in Holland and has rendered the poverty stricken not affluent but economically more comfortable; it has decreased crime, immorality, and illegitimacy. At the same time, I do not for a moment think that birth control alone will do away with the procreation of the feeble-minded, idiotic, half insane, chronic alcoholics, or chronic criminals. Birth control is not a panacea for all the ills of society, it is only one measure toward a saner and happier man-, woman-, and childhood. To minimize the harm to society and to future generations produced by the just mentioned class of unfortunates, the state should step in and demand medical examination of both the prospective father and mother, prior to granting them a marriage license. Even with our present limited but growing knowledge of the laws of heredity we should be able to prevent many of the evidently unfit from becoming parents and save many a child of to-morrow from a handicapped existence—a burden to himself and others.

As already indicated in my paper, there is a certain class so mentally and physically diseased that sterilization, or at least segregation, must be resorted to. Doctor Landis is absolutely right when he says that "A multitude of causes are

*This discussion has been revised and enlarged since its presentation.

responsible for the high tuberculosis rates that prevail." If I did not think that, would I have devoted twenty-five of the best years of my life to the combat of tuberculosis? Bad housing conditions, bad factory hygiene, over-crowded and unhygienic schools, useless studies and not enough outdoor play for the children, child labor, ignorance on the part of the laity, the late diagnosis of the disease on the part of the profession, failure of rational treatment and lack of institutions, are some of the multiple causes responsible for the high tuberculosis morbidity and mortality rate.

Those of my colleagues who have honored me by their steadfast friendship and constant co-operation will bear me out when I say that I have done my best to help to remove these causes during years of conscientious labor. And when you ask me why I became suddenly interested in birth control, apparently so foreign to my specialty, I will tell you. After all it was not so sudden as it seems. I have worked among the tuberculous for a quarter of a century, the rich and the poor, in palatial homes and humble cottages, in dark and dreary tenements and over-crowded hospitals; I have witnessed the tears and sufferings of many a tuberculous mother to whom I have had to decline help because it was too late to prevent. The despair of the poor, frail creature at the prospect of another inevitable confinement, and later the sight of a puny babe destined to disease, poverty, and misery, have opened my eyes to the utter immorality of thoughtless procreation; and my experience has been extended over only one disease of the masses.

I have approached the subject of birth control after deep reflection and with due reverence for all that is sacred in man's physical, moral, and religious life. I now believe in it with all the sincerity and earnestness I am capable of. I believe in it because by its aid there will rise a generation of men physically, mentally, and morally fit, and children free from disease and prepared to take up the strug gle for life.

I must revert once more to my friend, Doctor Landis' discussion of the tuberculosis problem. I said he was absolutely right in the statement that a multitude of causes were responsible for the high tuberculosis death rates that prevail. But I say with equal emphasis that he is absolutely wrong when he says in the following sentence that "the disease is one of the most contagious with which we have to deal." It is not the most but the least contagious and should always be classed with communicable diseases. It should not be considered as most contagious like smallpox for example. On the contrary, strictly speaking; it is not contagious at all, as the word contagious comes from the Latin contingere, "to touch." The touch of the honest, conscientious, and clean consumptive is no more contagious than that of a healthy person. This can hardly be said of the smallpox patient, be he ever so clean. It is best for an unvaccinated individual never to touch him, and still better to stay away from him as far as possible.

I would consider it a most regrettable thing if it should go out to the public that a distinguished member of the American Public Health Association had suddenly declared tuberculosis to be the most contagious of diseases. We have already too much phthisiophobia which makes the lot of the unfortunate consumptives hard enough.

For the kindly words said by my friend, Doctor Hurty, I am deeply grateful. He is always progressive, fearless, and outspoken. He agrees with me so thoroughly that I feel he will do his share toward a better understanding of the problem under consideration and be an enthusiastic supporter of the all-important movement for the betterment of mankind, which he loves so much.

To the member whose name I could not catch and who maintained that the whole question resolves itself into who should marry and who should not marry, I wish to say that it was merely for lack of time that I did not touch on this subject in my paper. That I strongly advocate a medical examination of the man as well as the woman prior to granting a marriage license, I have already said in my reply to Doctor Landis' criticisms. Much unhappiness and misery could be avoided by such obligatory examination and if we could add to our institutions of learning

a school of parenthood with obligatory attendance for every one desiring to enter the matrimonial state, we would add still more to the happiness and prosperity of the individual and the community at large.

Now a word to our Catholic friends and those of other faiths who are so strongly opposed to contraception and limiting family increase. Let us have no word of bitterness or reproach because millions of devout Catholics hold these views. Let us not antagonize either the Catholic priest or layman, who have a right to their convictions as much as we have to ours. This is a purely scientific meeting, composed of men who should not have, and I hope do not have, any hatred in their heart because of differences of opinion regarding purely religious views. Therefore, in reply to the somewhat passionate remarks of the distinguished statistician of the Metropolitan Life Insurance Company who questions the accuracy of my statistics and all of my statements, and says that it is all fundamentally erroneous, I wish to reply with less vehemence. I would calmly state that if we do not believe in official statistics of one kind, we cannot believe in official statistics of another kind. Mine were prepared by the government in Holland and by the United States government and officials of various cities. The gentleman makes the statement that because of my emotional attitude toward the question of birth control, my conclusions are fundamentally erroneous and drawn from an examination of only a very limited part of my subject. Mr. Dublin is not a physician; he is a Doctor of Philosophy, and this perhaps is an excuse for finding fault with my emotional attitude. My experience as a physician has brought me into contact not only with the happy and well-to-do but also with the poverty stricken and the mentally and morally diseased, with the unfortunate girl-mother and our unfortunate sister the so-called prostitute, and last but not least, with the honest but poor and ignorant mother of a large family who is a slave by day and by night. I have made earnest attempts to lessen the misery caused by thoughtless procreation, and I may perhaps be forgiven if I have approached the subject with deep conviction and not without emotion. We physicians cannot, and God forbid that we ever shall, deal merely with cold figures and statistical facts. We love science, yes, and accuracy in science and statistics, but this does not prevent us from feeling with our patients in their sufferings of mind, body, or soul.

I do not at all disagree with the gentleman when he speaks of birth release by the healthy and well-to-do. In my paper I have referred to this and also believe to have distinctly shown that I do not plead for race suicide but most emphatically for race preservation and multiplication of the best and noblest, physically, mentally, and morally. What I think of France of to-day, I have already said, and when the gentleman says that France is crying for more men, I might first say that the quality of the French soldiers has made up for the quantity. Russia has had and has the most men. It does not cry for more men, and still its achievements do not compare, at least not up to this day, with the achievements of France.

Lastly, when Dr. Dublin says: "The attitude of mind which is engendered by a nation-wide policy of birth control, brings about more infant mortality and more tuberculosis because of the general weakening of the stock which directly results therefrom," I most thoroughly disagree with this argument. My personal statistics regarding the frequency of tuberculosis among the later born children in large families have been, as you have heard, corroborated by Dr. Hurty's investigations; and all physicians know that women, particularly those of the working classes when worn out by frequent pregnancies, are more subject to tuberculosis than almost any other class of people. How then can Dr. Dublin believe that birth limitation would cause more tuberculosis? In Russia, where the word birth control is unknown, tuberculosis and infant mortality are the highest of all civilized countries. On the other hand, in Holland where we might speak of nation-wide birth control, as already stated in my paper, after forty years of this policy there is less infant mortality, an increase in population, a better physique, and a higher morality. Furthermore, there has not been a general weakening but a gen-

eral improvement in the strength of the stock which is shown by an increase in stature and increase in the longevity of the population at large.

My good friend, Assistant Surgeon-General John W. Trask, has admirably answered the question as to what, aside of the war and its demands for more men, is the common reason for wanting the population to grow. It is a splendid answer and I could not possibly improve on it but wish to thank him most heartily for what he said. And here I cannot help saying one word which, however, I hope may not be misunderstood. I am an American to the core of my being, but my cradle stood in Germany, whose people I love as warmly as ever; and yet I cannot help feeling that the over-population of Germany has been one of the vital causes of this disastrous war which has brought so much misery to all humanity. Prof. Robert J. Sprague, of the Massachusetts Agricultural College, expressed this view very strongly the other day at the meeting of the Genetic Association when he said: "The barbaric birth-rate of Germany hemmed in as she is by the other nations, made the great war inevitable and will, if it keeps up, make war forever in the future. Some believe this will work eugenically for the survival and predominance of the strongest and best race, but this is still a mooted question. The survival of the merely strong may result in the survival of the strong animal. Pressure of population on subsistence and area develops brutality, selfishness, and disregard of human life. It crushes leisure, generosity, and art, and makes impossible some of the finest virtues of the race."

I have already said how anxious I am that we may treat this subject as a scientific one and that we should only have in view the highest ideal, namely, a normal increase of population concomitant with our resources and an improvement of the quality of our population; in other words, we should strive to render the lives of man, woman, and child more healthy and more happy, and economically secure. My personal belief is that we shall thereby become more highly developed spiritually and approach more rapidly towards the millennium. When at last an enlightened government will permit contraception to be taught where it is likely to be productive of the most good, when in years to come we can show our Catholic brethren and all those who oppose us now that because of judicious birth control resulting in a rational family limitation, we have decreased poverty, disease, and crime and have produced a better generation of men and women, better equipped physically, mentally, and morally for life's mission, in short, men worthy to be called true citizens of a great republic, then I am sure our Catholic friends and other opponents will see that after all we have not been so wrong and they may then be willing to follow along the same lines of teaching rational birth control.

Nature's forces are blind. She creates without thought of provision for the offspring. Think of bacterial life if it had remained unchecked by the genius of a Pasteur, a Koch, a Lister; of the insects, such as the yellow fever and malaria-spreading mosquitoes, if unchecked by a Reed and a Gorgas! I could continue the theme of man's triumph and control over nature indefinitely if I were to enter into the field of agricultural and industrial science. I could tell you of the battles of the Australian farmer with the rapidly multiplying rabbit. Here nature's blind tendency to procreate devastated the fields destined to nourish the population. If non-interference with thoughtless nature comprises one of the tenets of the religion of others, to me man's intellectual control over nature's blind forces and nature's thoughtless procreation of undesirable bacterial, insect, or animal life, and his powers to bring forth more useful products and make life for man, woman, and child not only more bearable but even more beautiful and glorious, are among the greatest proofs of the existence of God's power in man. But the greatest of all achievements, the most divine gift which God has bestowed upon man, is conscious procreation. To me, judicious birth control under the guidance of the best and ablest among our own profession, among the clergy and the sociologists, based on the highest conception of sanitary, medical, moral, ethical, and economic reasons, can well be considered a spiritual asset which will uplift the race.

Book Reviews

Standard Methods for the Examination of Water and Sewage. Third edition. Revised by committees of the American Public Health Association, American Chemical Society and the referees of the Association of Official Agricultural Chemists. Price $1.25 postpaid. American Public Health Association, 126 Massachusetts Avenue, Boston, 1917.

It is twenty years since the first committee, appointed for the purpose, by the American Public Health Association, prepared a report on standard bacteriological methods for water analysis. The first report was published in 1898 and was widely used in various laboratories in the United States and Canada. Since that time two further reports have been prepared. These last two have included methods of chemical analysis in addition to the bacteriological methods. The second edition of the methods published in 1912, has been modified in this, the third (1917) edition, by the addition of methods for the examination of sewage and muds, the analysis of chemicals used in the treatment of water, and the determination of chlorine. In the present report, in the section devoted to chemical methods, the committee of the American Public Health Association has had the co-operation of the American Chemical Society, and of the referees of the Association of Official Agricultural Chemists.

The Committee on Bacteriological Methods has co-operated with a committee of the Society of American Bacteriologists and the result of their joint efforts is embodied in the section on bacteriological methods in the present volume.

This section differs from that prepared for the 1912 edition, in that the present report presents only methods which have in view the standardization of apparatus, materials and methods at present used in bacteriological water analysis. No reference is made to subjects such as the isolation and identification of bacterial species other than members of the B. coli group. General methods of bacteriological technique are omitted.

This volume is, of course, a necessity in every laboratory where water samples are being examined. It should also be in the hands of all students preparing to enter laboratories where water analysis are made.

NO NEED FOR A SIGN

He had opened up a fish shop, and he ordered a new sign painted, of which he was very proud. It read, "Fresh Fish Sold Here."

"What did you put the word 'fresh' in for?" said his first customer. "You wouldn't sell them if they weren't fresh, would you?"

He painted out the word, leaving just, "Fish Sold Here."

"Why do you say 'here'?" asked his second customer. "You're not selling anywhere else, are you?"

So he rubbed out the word "here."

"Why use 'Sold'?" asked the next customer. "You're not giving them away, are you?"

So he rubbed out everything but the word "Fish," remarking:

"Well, nobody can find fault with that sign now, anyway."

A moment later, another customer came in.

"I don't see the use of that sign 'Fish' up there," said he, "when you can smell them a mile away."

Clerk—Now, see here, little girl, I can't spend the whole day showing you penny toys. Do you want the earth with a little red fence around it for one cent?

Little Girl—Let me see it.

The Sanitary Inspectors' Association of Western Canada

Life in the Lumber Camps of Northern Saskatchewan : :

By J. H. Symons,
Provincial Sanitary Inspector

(Read before the Regina members)

As a preface to this article, I will explain the camp regulations.

In the first place, every employer of labor in the lumbering, mining, construction or other camp situated within the Province of Saskatchewan, shall upon the establishment of each and every camp, notify the Commissioner of Public Health of the same, and annually thereafter upon a date to be fixed by the Commissioner.

The term "Camp" means any lumbering, mining, railway construction, or other camp where 20 men or more are employed and housed in temporary quarters, such as cars, tents, buildings or enclosure other than the bona-fide homes of employees. An important requirement is a hospital at the camp with a supply of bandages, liniments and general necessities for emergency cases, also to have a contract with a doctor, who is to visit the camp every week. Where it is convenient to get to a city or town hospital within 20 or 30 miles from the camps, the company usually make arrangements with these institutions to have those of their employees who are taken sick or become injured, treated there at the expense of the camp owners.

When setting out to inspect lumber camps, it necessitates driving from 10 to 20 miles through the forests, a pleasure to be looked forward to from one season to another. In making a drive of 40 to 50 miles it has been my pleasure to inspect six or seven different sets of camps, all being operated by different foremen and under management of one lumber company.

In going into the camp, the first place one stops is at the office of the foreman. This is the inspector's home while in camp. If he remains over night, there is always a spare bunk for his own use and all the comforts that are to be had are given him. If he should awaken during the night he can listen to the sweet music of the timber wolf.

The camp consists of several buildings. An office, where the foreman lives. He is in charge of the entire works. In this place he has a clerk who takes charge of all the supplies, such as the workmen need, and consists of tobacco, boots, overshoes, mitts, gloves, socks, overalls and many other necessary things too numerous to mention. He is also timekeeper of all the men. There is also a blacksmith shop where the horses get reshod; logging chains are welded and the various kinds of iron work is repaired; a carpenter's shop, where the woodwork of the works, implements, such as sleighs and water tanks, are repaired. There is also a bunk house, which is the men's living quarters when off duty. These are built in various sizes; most of them are about 65 ft. long by 40 ft. wide, and of an average of 12 ft. high with single bunks on either side, facing to the outer walls two tier high, being similar to upper and lower berths on a sleeping car, in others they are arranged lengthwise of the building in a like manner. Permanent benches are arranged at the front of bunks all around the building on either side and one end. In a large bunkhouse a very large iron box-stove is placed about 15 to 20 feet from each end of the

building. These are about 5 ft. long by 2 ft. wide. There is placed on the top of the stoves large galvanized iron water tanks, which are kept full of water made hot for the men for washing themselves in, when coming in from work, also to keep the air of the bunk-house sufficiently humid. At the entrance end of the bunk-house, a space is reserved on each side of the door, fitted up with large wooden troughs in which the men place their wash basins when making their ablutions. Here also the camp barber operates. His services being in demand during the hours between supper and "lights out."

Bunk-houses are usually lighted and ventilated by roof lights; 3 or 4 on each pitch of the roof. Attached to these roof lights is a long pole by which they are opened and closed. This is operated by the bull cook, and woe betide the man who interferes with the ventilation he sees fit to supply. Over the stove there is a net work of small poles, and wire is stretched from end to end of the buildings where the men can hang and dry their wet socks, mitts and other articles of clothing. Instead of mattresses, the bunks have a quantity of dry hay, upon which the men spread their blankets; this forms a fairly comfortable and healthy bed.

Another building of great importance is the cook house and dining hall. In most cases, these two are combined, in others they are separated, but adjoining each other. The dining room is usually arranged with tables on either side of the building and one up the centre. Stationary benches are fixed on either side of tables for seats. Each man gets one plate, a knife, fork and spoon and a small bowl for a cup. The dishes are of strong graniteware; the one plate being used for all courses during the meal. Once the dinner gong is sounded, there is no time wasted by the men in getting seated at the table. In 10 to 15 minutes every man has had his supply, and is gone; but during this time the cooks are the hardest worked men in the camp, keeping the others supplied with food. There is a small building attached to the kitchen where a supply of all kinds of vegetables are kept, another for storage of meat. There is a man attached to the camp staff called the "bull cook" whose duty it is to keep the camp floors washed in the various buildings, such as the bunk-houses and offices once or twice a week and to supply wood and to keep all the fires going in the different places, except the kitchen. His duty there is to keep a good supply of wood and water on hand for the chief cook, also keep the boilers filled on the stoves in the various other buildings of the camp. He has also to remove waste water to a pit dug for the purpose at a distance from the camp and any water supply, so as to safeguard it from any contamination. All waste food from the kitchen is fed to hogs, which are kept some 200 yards away from the other buildings. This is another of the duties of the bull cook, and I might say he is hardly ever out of a job. There is also privies and closets erected for the use of the men, and are located at a distance of 50 to 100 yards from the bunk-house. They are constructed of small logs, and all spaces between them are plastered the same as an ordinary log house. This place is built over a large pit from 10 to 12 feet long by 4 feet deep and 4 feet wide.

Another building, which is very important, is the laundry. This place is usually built out by itself, and those who operate it have a contract with the company. They are often Chinamen. It is compulsory that every man gets his underclothes and shirts washed every week. There are also large horse barns. These buildings are constructed of whole trees or logs, and sometimes are 80 ft. long. The logs vary in thickness from 8 to 18 ins. They are built in the ordinary log frame manner, notched at the corners and laid one over the other, small and large ends alternately.

Lumber is generally used for flooring. In some places small poles are used, but seldom, as that kind of floor is difficult to keep clean. The floors of the horse barns are constructed of poles hewn square on two sides to make them fit fairly tight together.

In former days horses were used entirely for hauling logs to the various landings on lakes and rivers. From there they

were taken to the saw mills when the ice broke up in the spring, but to-day, the large companies only use the horses for the skidding of logs to large piles on the various branch roads. There they are loaded on large sleighs with bunks 10 ft. wide and stakes on each end of the bunk 8 ft. high. Each of those sleighs will carry about 100 logs varying in length from 8 to 14 ft. The empty sleigh, fully equipped for hauling them, will weigh 2 tons each. The horses are used for drawing the logs from the piles on the branch roads out to the collecting stations on the main trail. At those places 10 to 25 sleigh-loads of logs are assembled together and taken by a locomotive to the landings on the lakes and rivers. This main trail is kept sprinkled with water every day with large water tanks constructed with a fire place in them to keep the water from freezing.

The engine, which I spoke of, used in hauling the train load of logs, is mounted on a sleigh consisting of two bobs similar to our ordinary bob sleighs, only of much stronger construction. The front bob is much narrower than the other, and is used for steering the train. This locomotive is propelled by an endless chain about 1½ ft. wide, and attached to it are short steel spikes operated over two drive wheels on both sides of the engine. In their movements the steel spikes catch the icy road and force the engine ahead, crawling along similar to that of a caterpillar.

At the commencement of the lumber camp operations, each season, the first work is to get the main trail into the different locations where camps are to be established; then the camps are built. Branch roads are then constructed in from the main trail at various places. Those branch lines will extend from 3 to 6 miles.

Once the camps are built, the full force of men are taken in. The number employed generally are 100 to 150 at each camp. These are divided into various groups. Some are employed cutting down the timber and sawing them into logs, others getting them into large piles with horses on the branch roads, some are repairing roads, others loading logs, hauling out to the main trail at collecting stations, making up the trains, etc.

Though the lumberman has a rough, hard life, yet his occupation is a healthy one, and under his rough exterior there exists a warm, sympathetic heart and a kindly disposition.

It is with pleasure I look forward to these visits to the lumber-camps.

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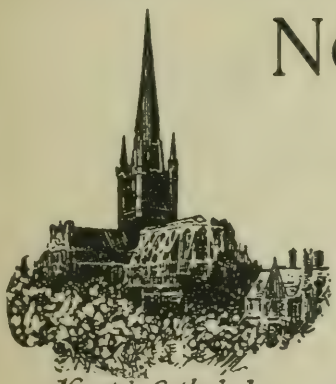

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Patient saving of $50.00 per annum for 20 years would give a depositor $1,000, plus interest, but if he died during the first year his family would withdraw only $50.00

Under a Mutual Life Endowment policy maturing at the end of 20 years a deposit of $50.00 would carry with it an indemnity of $1,000, payable to the beneficiary if the assured died in the first or any succeeding year—and the full amount with profits is payable to the assured if living at maturity.

Thus an Endowment policy in the Mutual combines Savings, Investment and Protection.

The Best Security one can hold is a Mutual Policy.

The Mutual Life Assurance Company of Canada

WATERLOO, ONTARIO

A Free Course in "Salesmanship"

We have thought about the young man who sees no prospects ahead. Would you like to be in a business that will give you

A Good Living Wage
A Profitable Future
A Provision For Old Age

We teach a man the Insurance Business, which offers permanent success, does not fluctuate, is a professional occupation, and has been truly named "The best paid hard work in the world."

This is done by a correspondence course and personal assistance, free of charge.

When he is fully prepared for the work, we place him in a position and help him to make good.

The first two lessons of the Company's correspondence course will be sent to anyone interested. It will pay young men who desire to get on in the world to look into this.

All correspondence strictly confidential.

CANADA LIFE ASSURANCE CO.
Head Office: TORONTO.

You Look for Security

Whether with the intention of taking out insurance or associating yourself with some Company, you look for security.

The latest figures emphasize the unexcelled financial position of this Company.

Business in Force over		**$59,600,000**
Assets	**"**	**16,400,000**
Net Surplus	**"**	**2,600,000**

These are reasons why the Company is known as

"Solid as the Continent"

North American Life Assurance Co.

Head Office: Toronto, Can.

Are You to Have a Clean-up Campaign in Your City ?

If you are to have one

You should get in touch with the Metropolitan Representative in your city. He will be able and glad to help you.

If you are not to have one

You should organize one, it will do much to emphasize to your citizens the importance of cleanliness and right living.

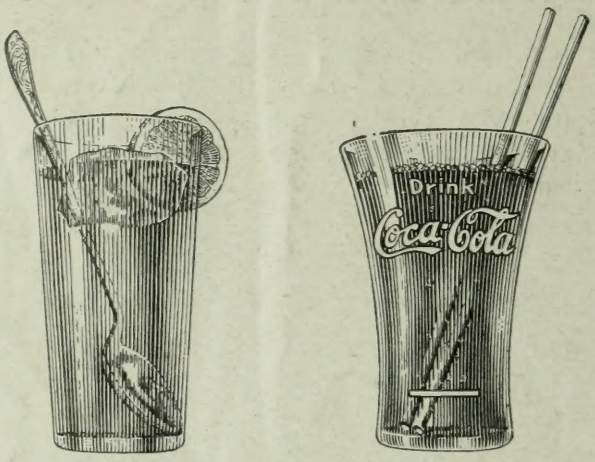
Last year the Company co-operated in Clean-up Campaigns in 247 cities and towns and through its agents brought the Clean-up message into 1,500,000 homes during the days set aside for Clean-up. This year many more cities will be added to the list.

Your City Should Be One of the Number

Call on the Metropolitan representative for details or write to the Welfare Division.

Metropolitan Life Insurance Company

1 Madison Ave., New York City



Doctor—Compare

Ice Tea	Coca-Cola
Caffeine 2.02 grains	Caffeine 1.21 grains
Sugar	Sugar
Citric acid (from lemon)	Citric acid (from lemon)
Tannic acid (objectionable)	Phosphoric acid (beneficial)
Flavor—tea	Flavor—fruit extracts

It would seem from the above that a glass of Coca-Cola differs but little (and then to its advantage) from a glass of ice tea with a dash of lemon, and that only when tea is contra-indicated may Coca-Cola be questioned.

Let us recommend Coca-Cola to you, Doctor, as a wholesome, delicious and refreshing drink. You of all men should appreciate it most, for you can understand its points of superiority.

A Digest

of the authoritative facts and figures relating to the composition and dietetic value of Coca-Cola will be sent on request.

THE COCA-COLA COMPANY, TORONTO, CANADA

10M

Delicious - Refreshing

Coca-Cola

Made in Canada